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Review by Peer 304 on manuscript:

Manuscript title censored

Revision recommendation: Major revision

ADDED INFO ABOUT PUBLICLY FEATURED REVIEW

Author of this peer review is Dr. Jenny Dunn,

Conservation Scientist at

the Royal Society for the Protection of Birds, UK.

PEQ = 4.5 / 5

Peer reviewed by 4 Peers.

Introduction

This manuscript is a thorough study of [redacted] nesting ecology in [redacted] over two breeding seasons. The authors measure nest variables at three scales and relate these to nest site selection, concluding that [redacted] select [redacted] for nesting and thus [redacted].

Merits

score: 4.5 / 5

The manuscript describes a thorough and well-executed study, and the field methods are suited to addressing the questions, although the use of controls is not consistent and not always clear. The analyses seem mostly correct, although there is an argument for advocating the use of multivariate statistical analyses in places, rather than multiple univariate analyses. The manuscript is generally clear, although sections (especially in the discussion) would benefit from rephrasing for clarity and brevity.

Critique

score: 4.5 / 5

There are a number of general and specific problems with the manuscript.

Firstly, the work is mostly descriptive and not focused on specific hypotheses. For example, the second aim of the study was to "find [redacted] patterns that can be of practical value in [redacted]", but the authors need to elaborate on what they expected to find and why.

The authors mention in their cover letter that theirs is, to their knowledge, the first research to confirm the suggestion of [redacted], but they do not explicitly state anywhere in the manuscript that this was one of their hypotheses, or go into further detail as to [redacted]'s suggestion.

The work is very specific, in terms of species and geography - the manuscript would benefit from discussion of the wider relevance of the study.

The authors mention in their abstract and discussion that [redacted] does not present a threat to [redacted]. However, this suggestion is not introduced at any other point in the manuscript and seems to be more a cursory point. This applied relevance should be explored more thoroughly.

The authors also mention that this is the first study to examine [redacted] ecology in [redacted], but their expectations are not stated explicitly. Do they expect ecology to be consistent across the species' range, or do they expect geographic clines in nesting traits? It might be worth presenting examples from other species where geographic clines influence ecological traits.

It would be useful for the authors to compare the density of nests that they found to the pair density estimates they provide in the various habitats. The authors should discuss the potential for detection bias from their methodology (i.e. not detecting any nests that failed early on in the nesting attempt).

The authors should also acknowledge and justify their delay in measuring nest variables following fledging and confirm that habitat parameters are unlikely to change in this 3-4 month window.

From the authors' methodology it is difficult to confirm habitat 'selection' generally, as there are no control trees/plots (although the authors do mention comparing NPs to study plots, but the definition of a study plot is not clear, so there may be a control in this instance - line 190). The only traits examined in terms of selection in relation to availability is nest tree species, and nest tree width, so the authors should instead refer to habitat use, rather than selection.

The authors might like to consider conducting some of their analyses using multivariate methods, rather than the use of multiple single statistical tests increasing the chance of a type I error.

The results section could be shortened considerably by rephrasing in a more concise format.

Some figures could be combined, and others may not be necessary as they duplicate adequate description in the results. For example, Figures 2 - 4 could probably be combined for clarity, and figure 6 is probably not necessary as the dimensions are provided in detail in the text.

For the analysis of tree species selection, the authors need to present their confidence intervals for their data. They cannot simply state that their CIs overlap (line 269) but they still think habitat selection is occurring (line 381) - the results of the statistical tests indicate otherwise. Davis et al (2012) might be useful to read in this context.

The significance of landmarks in the vicinity of the nest is not made clear. This concept should be introduced, and it's context stated.

Additional references that may be of use are listed below.

The manuscript would benefit from English language editing.

Discussion score: 4.5 / 5

The manuscript is currently interesting as a specific study of [redacted] nest site selection at [redacted], but has limited wider relevance. I think there is potential for broadening the scope of the manuscript by further discussion of the applied relevance of the work for [redacted].

References

[1] Anonymous authors (2013) [redacted] (unpublished manuscript) - *Peerage of Science*

Davis, M. L., Stephens, P. A., Willis, S. G., Bassi, E., Marcon, A. Donaggio, E., Capitani, C. and Appolonio, M. (2013) Prey selection by an apex predator: the importance of sampling uncertainty. PLoS One 7(10): e47894

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Additional comments for authors

Line 45 - "are", not "play"

Line 51 - reference confirming that [redacted] are the biggest habitat generalist among [redacted]

Lines 52 - 52: reference needed here

Line 59 and throughout - replace "stressed out" with "stressed", or "emphasized"

Lines 73 - 76 - footnote should be integrated into the text

Lines 125-126 - did you calibrate these to control for any changes in the 3-4 months since the nests were active?

Lines 127-131 - what equipment did you use?

Line 127 and throughout - replace "to the precision of" with "±, or +/-"

Line 140 and throughout - it might be better to replace "vital" with "alive"

Line 145-146 - this is the first mention of feeding signs: a) they should be described in the methods and defined, and b) would they still be present after 3-4 months - or what is it you are trying to assess here?

Line 148 - somewhere in this section you should define a study plot as this is not currently clear

Lines 172-173 - did you test for site differences before pooling your data?

Line 180 - from reading further on, I understand why you did this, but this should be justified here.

Line 215 - it is not clear what these figures represent, but mean ± 1 SE would be standard.

Line 238 - I think this is a typo - you state no sig correlation but $p<0.05$.

Line 238 and throughout - state exact p values

Line 269 - there is no uncertainty from this test - there is no statistical support for a preference

Line 281 - providing mean ± 1 SE for both groups would aid the reader's understanding here

Line 291 - I am unclear as to why you looked for similarity here - why not just test for differences?

Line 300 - I am unclear as to what you are looking at here - how common were any of these features in the wider landscape? Are you looking at selection?

Line 318 - what is the relationship described by Conner et al? Provide more detail here

Line 327 - I think you mean "primary" rather than "primal". Also, other authors suggest auditory cues as important - this might be worth mentioning.

Lines 359-360 - quote figures here - how much smaller? You also need to introduce the subspecies you are working on much earlier in the manuscript.

Line 371 - you need to be clearer here - I thought you were talking about angle, but you introduce the idea of an overhang - did you also measure this?

Table 2 - it is not clear what you chi-squared test is testing for here. Your legend states that your chi-squared test found no difference, but one of your p values is significant and the other isn't.

Figure 7 - it would be useful to mark where your differences lie (and for other figures). If there are no significant differences, it might be worth considering removing this figure.

Figure 8 - I'm not sure this is necessary as these trends are adequately described in your results.